



The Presidential Green Chemistry Challenge Program Scope and Objectives

BACKGROUND:

President Clinton announced the Presidential Green Chemistry Challenge on March 16, 1995, as part of the Reinventing Environmental Regulations Initiative to "promote pollution prevention and industrial ecology through a new EPA [U.S. Environmental Protection Agency] Design for the Environment partnership with the chemical industry." EPA's Office of Pollution Prevention and Toxics is leading this voluntary partnership program with other EPA offices, other federal agencies, members of the chemical industry, trade associations, scientific organizations, and academia.

SCOPE AND OBJECTIVES:

The Presidential Green Chemistry Challenge was established to recognize and promote fundamental and innovative chemical methodologies that accomplish pollution prevention and that have broad application in industry. For purposes of the program, green chemistry is defined as the use of chemistry for source reduction, the highest tier of the risk management hierarchy as described in the Pollution Prevention Act of 1990. Green chemistry involves a reduction in, or elimination of, the use or generation of hazardous substances—including feedstocks, reagents, solvents, products, and byproducts—from a chemical process. Green chemistry encompasses all aspects and types of chemical processes—including synthesis, catalysis, analysis, monitoring, separations, and reaction conditions—that reduce negative impacts on human health and the environment relative to the current state of the art.

Through awards and grants programs, the Presidential Green Chemistry Challenge recognizes and promotes fundamental and innovative technologies that incorporate the principles of green chemistry into chemical design, manufacture, and use, and that have been or can be utilized by industry in achieving pollution prevention goals.



SCOPE FOCUS AREAS

The Presidential Green Chemistry Challenge recognizes and promotes the following green chemistry methodologies:

1. The use of alternative synthetic pathways for green chemistry, such as
 - Catalysis/biocatalysis,
 - Natural processes, such as photochemistry and biomimetic synthesis, or
 - Alternative feedstocks that are more innocuous and renewable (e.g., biomass).
2. The use of alternative reaction conditions for green chemistry, such as
 - Use of solvents that have a reduced impact on human health and the environment, or
 - Increased selectivity and reduced wastes and emissions.
3. The design of chemicals that are, for example,
 - Less toxic than current alternatives, or
 - Inherently safer with regard to accident potential.

Additional information on the Presidential Green Chemistry Challenge program is available by calling EPA's Pollution Prevention Information Clearinghouse at 202 260-1023. Information is also available from Paul Anastas and Tracy Williamson of EPA's Industrial Chemistry Branch at 202 260-2659, and via the Internet at (<http://www.epa.gov/docs/gcc>).

